HELP ?

OPEC as omen

Foreign Affairs; New York; Nov/Dec 1998; Jahangir Amuzegar;

Volume: 77
Issue: 6
Start Page: 95-111
ISSN: 00157120
Subject Terms: Oil reserves
Petroleum industry
Foreign investment
International markets
Economic development
Cartels
Oil reserves
Natural gas reserves
Classification Codes: **1510**: *Energy resources*
8510: *Petroleum industry*
1300: *International trade & foreign investment*
9178: *Middle East*
9179: *Asia & the Pacific*
1120: *Economic policy & planning*
Geographic Names: Middle East
Azerbaijan
Kazakhstan
Turkmenistan
Uzbekistan
Caspian Sea
Companies: **OPEC**
Organization of Petroleum Exporting Countries
OPEC

Abstract:
The full extent of the subterranean energy resources of Azerbaijan, Kazakstan, Turkmenistan, and Uzbekistan is still unknown, but by all accounts their mineral wealth is the largest find in three decades. Still, the nascent republics' current energy production is relatively miniscule. They are thus eagerly soliciting foreign capital and modern technology to exploit their reserves and are believed to need some $50-$70 billion of foreign investment during the coming decades. The economic boom that will inevitably follow such a bonanza promises to mimic, in many respects, the plight of the members of OPEC in the mid-1970s and after. OPEC's journey from riches to rags is powerful proof of the perils of a tempting for temporary energy boom. The Caspian states would do well to learn from their predecessor's failures.

Full Text:

A WARNING TO THE CASPIAN

WITH THE breakup of the Soviet Union in 1991, four new states emerged on the edges of the Caspian Sea, endowed with oil and gas reserves estimated to be worth between 2.5 trillion and $3 trillion at today's prices. The full extent of the subterranean energy resources of these countries-Azerbaijan, Kazakstan, Turkmenistan, and Uzbekistan-is still unknown, but by all accounts their mineral wealth is the largest find in three decades. Still, the nascent republics' current energy production is relatively minuscule. They are thus eagerly soliciting foreign capital and modern technology to exploit their reserves and are believed to need some $50-70 billion of foreign investment during the coming decades.

The economic boom that will inevitably follow such an enormous bonanza promises to mimic, in many respects, the plight of the members of the Organization of Petroleum Exporting Countries in the mid-1970s and after. OPEC'S journey from riches to rags is powerful proof of the perils of a tempting but temporary energy boom. The Caspian states would do well to learn from their predecessors' failures.

THE NEW REPUBLICS

THERE ARE notable historical and institutional differences between the OPEc and the Caspian Sea players, but the newcomers seem to be on a path to financial and industrial development similar to that of their OPEC counterparts. Ritzy hotels, modern office towers, fancy Western restaurants, expensive designer boutiques, Mercedes fleets, and eye-catching villas are already mushrooming in Baku, Almaty, and Ashkhabad, just as they did in Lagos, Caracas, Tehran, and Kuwait City after the sudden oil price rise in 1974.

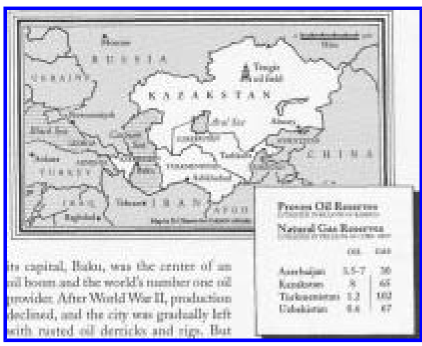
The Caspian beginners have much in common. Although ethnically heterogeneous, all four have Muslim majorities, albeit with varying measures of religiosity. Politically, all four countries are led by strong, autocratic ex-communists who rule with an iron hand. Without democratic and free-market fixtures like the rule of law, civil society, an independent judiciary, a free press, effective tax codes, and fiscal accountability, all four are among the least privatized and reformed economies of the former Soviet empire and thus prone to misdirection and mismanagement. From the highly personal nature of the republics' rule emanate potential political instability, vulnerability to unsavory bureaucratic scams, and protracted economic weakness. Finally, the landlocked Caspian states all lack direct access to consumer markets in Europe and the Far East. All need pipelines to transport their energy to the rest of the world. The pipelines inherited from the Soviet era are woefully inadequate to the task of carrying the potentially available supplies. But the construction of new pipelines has been fraught with deadlocks, disputes, and power plays among the United States, China, Russia, Turkey, and Iran. The region remains prone to territorial conflicts, ethnic rivalries, and civil wars.

The differences among the four are equally striking. Geographically, Kazakstan is by far the largest with 2.7 million square kilometers and Azerbaijan the smallest with only 87,ooo. Uzbekistan, with 23 million inhabitants, has the largest population, while Turkmenistan has the smallest, at 4.5 million. With an estimated per capita income of $1,40o, Kazakstan is the richest, while Azerbaijan is the poorest with only $480. All have experienced negative annual growth and falling per capita income over the last decade. In terms of energy resources, Azerbaijan and Kazakstan have large deposits of both oil and gas; Turkmenistan and Uzbekistan are blessed with large natural gas reserves but have much less oil.

Azerbaijan's proven oil reserves are estimated at 3.5 billion to 7 billion barrels and its gas reserves at 30 trillion cubic feet. A century ago, its capital, Baku, was the center of an oil boom and the world's number one oil provider. After World War II, production declined, and the city was gradually left with rusted oil derricks and rigs. But recently Baku has become a modern version of America's Wild West, with all the trappings of an oil boomtown. The country now has two small oil pipelines-one through Russia, the other through Georgia to the Black Sea. While admittedly limited, the pipelines let Azerbaijan's petroleum sector export oil directly to Western markets for the first time in 65 years. The Azerbaijan International Operating Company-a major multinational, with four U.S. corporations controlling 4o percent of the total venture-has a 3o-year, $8 billion contract with Baku to develop three offshore oil fields. Another contract, worth an estimated $4 billion, has been signed with a Russian-led consortium in which Iran has a small share. Of the four republics, Azerbaijan promises to be the first to export crude through new pipelines.

Kazakstan's fate is more closely tied to Russia's. Although already a relatively important energy exporter, the government in Almaty is still on Moscow's economic leash. Since its main oil fields are in the west, adjacent to the Caspian Sea, its only oil outlet is through a pipeline running to the north, across Russia. Its oil refineries, located farther to the east, are fed by pipelines from Siberia. Kazakstan's proven oil reserves are estimated at 8 billion barrels and its gas reserves at 65 trillion cubic feet. The country's Tengiz oil field, discovered by Moscow in 1979, is now considered the world's single-largest find in the last zo years. Since 1992, Kazakstan has had a deal with Chevron to develop the field. Under a consortium of Chevron, Mobil, and Russia's Lukoil, a new pipeline is being built from the Tengiz field around the top of the Caspian Sea to the Russian Black Sea port of Novorossiysk. Kazakstan has also signed an agreement with China to transport oil to China's western provinces.

Turkmenistan, in contrast, has relatively small known oil deposits (about 1.2 billion barrels), but the ancient land has some 1o2 trillion cubic feet in gas reserves-the world's third largest, behind only Russia and Iran. Before the breakup of the Soviet Union, Turkmenistan exported its gas supplies throughout what is now the Commonwealth of Independent States via pipelines through the Russian republic. By the mid-1990s, however, Moscow had limited such transports, forcing the Turkmens to seek other routes, partly through Iran.



Enlarge 200%
Enlarge 400%

The final Caspian oil state, Uzbekistan, is well endowed with natural gas, estimated at nearly 67 trillion cubic feet, but its proven petroleum reserves are a paltry 6oo million barrels. Gas is exported to a few other Central Asian countries and used domestically to generate power, but its use falls far short of its potential.

GREAT EXPECTATIONS

THE ENERGY-RICH Caspian republics should hope that history does not repeat itself and that their rising fortunes lead to a happier ending than OPEC's. Caspian leaders would do well to recall that with the oil price explosions of 1974 and 1979, OPEC members' spectacular wealth was seen as permanent. A steady stream of oPEc income was projected to fill the gaps in each country's national savings, foreign exchange earnings, and public budgets-the traditional constraints on the Third World desire for rapid and sustained economic growth. Accompanying OPEc's anticipated power and wealth were dire predictions regarding the industrial West's reversal of fortune, added miseries for Third World countries without oil, and even possible threats to the stability of the international monetary system. "With the possible exception of Croesus," J. E. Akins, an astute and respected oil expert, wrote in these pages in

April 1973, "the world will never have seen anything quite like the wealth which is flowing, and will continue to flow, into the Persian Gulf." When crude prices made another explosive jump after the Iranian Revolution in 1979, another prominent oil analyst declared that "the world as we know it now will probably not be able to maintain its cohesion, nor able to provide for the economic progress of its people, against the onslaught of future oil shocks-with all that this might imply for the political stability of the West, its free institutions and its internal and external stability." OPEc's accumulated foreign exchange reserves were widely projected to exceed $6oo billion by 198o and $1.2 trillion by 1985. With the dawn of such Midas-type affluence, OPEC members expected to finance all their development and defense needs without forced savings or belt-tightening, achieve rapid economic growth and high employment without inflation, buy into Western industrial and financial giants, help other oil-starved developing countries, and lay the foundations for greater political maturity and participatory democracy

History, however, played a cruel joke on the soothsayers. A decade after the historic oil price rise of i974, neither OPEC members nor Western industrial powers looked remotely like the pictures painted earlier. The West's political stability, economic prosperity, free institutions, and internal and external security were hardly affected. The impact of higher oil prices on Western economies was limited, short-lived, and not altogether negative since the oil crisis drew greater attention to conservation and environmental issues. OPEC, by contrast, was badly bruised. Apart from a number of traumas unrelated to oil-a revolution in Iran, two bloody and ruinous wars between Iraq and its neighbors, and coups in Nigeria, Qatar, and Venezuela-the oPEc members' own miscalculations and mismanagement ultimately brought them external payments deficits, rising budgetary shortfalls, runaway inflation, considerable delays and cost overruns in poorly designed projects, an enormous waste of resources, and mounting external debts.

Contrary to alarmist forecasts, OPEC never acquired the power to set oil prices. The supposed global need for OPEC oil proved highly exaggerated, and the terms of trade turned against oil exporters and in favor of Western consumers. Instead of becoming bankers to the world, six members-Algeria, Indonesia, Ecuador, Gabon, Nigeria, and Venezuela-ultimately became wards of the International Monetary Fund. Instead of amassing trillions of dollars of foreign exchange reserves, OPEC members became some of the world's largest debtors. Instead of bringing the West to its knees, OPEC members were not even capable of defending their own national interests without Western military or political support and were virtually powerless to influence the oil market itself. From 1974 to 1998, OPEC members collectively earned more than $3.5 trillion from exporting oil and gas-the largest monetary transfer in world history. Meanwhile, they amassed debts of over $400 billion, excluding grants-in-aid received by some. Where did all the money go?

The foremost overall objective among all OPEC members was creating a sustainable base for a post-oil economy. This concern over the eventual exhaustion of their oil reserves led them all to seek economic diversification. With various degrees of resolve, all members adopted national development agendas focused on reducing oil dependence, ensuring greater self-sufficiency, modernizing economic infrastructures, lowering income inequalities, helping poorer oil-less developing countries, and, not least, strengthening national security and defense. Since by law or custom the state was the titular owner of energy reserves and the sole recipient of oil revenues, oil windfalls were allocated at the leadership's discretion. All member countries engaged in national economic planning and exercised varying degrees of state intervention in the economy, to disastrous effect.

No accurate accounting of the oil windfalls has been revealed by OPEC itself Figures published by OPEC members and international financial organizations show that the lion's share (65 to 75 percent) of the post-1974 gross domestic product (including the oil bounty) went into private and public consumption, raising national standards of living that were abysmally low in some states (Ecuador, Indonesia, and Nigeria) and meager in others (Algeria, Gabon, Iran, Iraq, and Venezuela). A significant portion (zo to 35 percent) of national output was earmarked for domestic investment, covering infrastructure, public services, and government projects in agriculture and industry, all under the banner of "sowing oil" to reap non-oil products. Typically, achieving self-sufficiency in food and basic staples absorbed the bulk of agricultural investments. Energy-intensive megaprojects, in turn, formed the nucleus of what the OPEC members dubbed "resource-based industrialization." The richer members of the group-the so-called capital-surplus countries of the Persian Gulf shared some of their oil bounty with poorer developing nations outside OPEC through grants and loans and began sophisticated military buildups. In contrast, some of the poorer members (Ecuador, Gabon, Indonesia) were the recipients of foreign aid, while others (Algeria, Iran, Iraq, Nigeria, and Venezuela) supplemented their oil receipts by borrowing from abroad.

Due to the ease with which the windfalls were collected, OPEC governments viewed oil and gas revenues as costless resources that could be redistributed at will among their peoples. Much of the oil "rents" were spent on consumer price subsidies for fuel products, housing, utilities, and public services. Much was also set aside for electricity, irrigation, fertilizer, transport, and communication. A large part of the oil windfall was invested in public industrial enterprises that almost never ran a profit or faced international competition. Subsidies in the Persian Gulf countries ran as high as lo to 20 percent of GDP in some years. OPEC paid a high price for its lack of vision.

THE WEALTH TRAP

SOME MEMBERS of OPEC did better than others. The variety of experiences reflected not only their initial level of economic development, different resource endowments, and external circumstances but also their chosen growth strategies and economic policies.

While all OPEC states invested massively in infrastructure, the relative magnitude of improvement was far from uniform. In all member countries, basic infrastructure-paved roads, railroad tracks, power-generating capacity, and electricity production-was expanded dramatically. Sewer construction and water treatment were given high priority, as were public housing and urban construction. In some of the richer countries, the physical landscape was transformed beyond recognition. Adult literacy rose substantially, as did school enrollment. Telephones, radios, and television sets became common. Daily calorie consumption and other health-related indicators improved markedly, albeit at different rates. In short, the OPEC members allocated a greater share of their national income to education and health than any other developing bloc.

In economic growth, however, OPEC members as a whole had perhaps the least expected-and most ironic-performance. Despite enormous and unprecedented domestic investment, the estimated average annual real growth of GDP in virtually all member economies between 1974 and 1994 was actually lower than their annual GNP growth rate between 196o and 1973. To make matters worse, OPEC's population grew nearly 6o percent between 1974 and 1997, at an average annual rate of 2.9 percent, well exceeding the i.8 percent for all developing countries. At the same time, the size of the workforce rose even faster. In countries such as Algeria, Libya, and post-1979 Iran, population growth was encouraged as a matter of ideology. The high-income, labor-strapped countries of the Persian Gulf adopted extremely liberal immigration policies to import foreign labor.

Rapidly rising population, combined with relatively modest GDP increases, predictably resulted in a slow increase or an actual decline in per capita real income in almost all OPEC members. Only

Indonesia and Ecuador managed to buck the trend. Real per capita incomes in Iraq, Kuwait, and Venezuela during the 1990s fell to levels not seen since around 196o. Libya and Saudi Arabia also had their highest real per capita incomes in the 196os; Algeria, Gabon, Iran, Nigeria, and the United Arab Emirates (UAE) in the 1970s; and Ecuador in the 198os. Indonesia is the only group member whose per capita real income peaked in the 1990s.

Unemployment rates for most group members have been unavailable or unreliable for most years. The active labor force increased even faster than the population, but as a percentage, the workforce in all member states (except Qatar and the UAE, which relied on expatriate labor) was still considerably smaller than average for developing nations. Altogether, according to World Bank estimates, unemployment rates in the Middle East and North Africa (excluding some Persian Gulf countries) during the early 1990s were the highest in the world. Income inequality and poverty rates differed among member states, but few were immune. Poverty in all group members reflected unemployment or underdevelopment, insufficient education, and poor health conditions.

Price stability and budgetary discipline varied considerably among group members and over time. As a rule, inflation was subdued in the small Persian Gulf monarchies, which pursued relatively stable currencies and liberal trade policies. In contrast, countries with trade restrictions and multiple currency rates experienced high domestic inflation. Apart from Iraq (which suffered from hyperinflation after U.N. sanctions were imposed for its 199o invasion of Kuwait), Ecuador, Venezuela, Nigeria, Iran, Algeria, and Libya underwent annual doubledigit hikes in domestic consumer prices for almost the entire period since 1974. For all these countries, inflation also accelerated between 1985 and 1995 as compared to the period between 1974 and 1984. Almost the entire membership also incurred budget deficits year after year. Rising social welfare expenditures, bloated bureaucracies, limited tax bases, project cost overruns, and large military outlays combined to create fiscal black holes. The dependence on oil and gas income also stubbornly continued to loom large, exposing government budgets to the vagaries of the global oil market.

While OPEC as a group was once the only developing region to be a net capital exporter, its annual deficit on goods and services became one of the largest of all developing areas by the mid-1990s. Even in the Gulf emirates, where "saving abroad" was widespread, overseas assets began to plunge, particularly after the costly 1991 Gulf War. The central governments of all group members went into external debt. In 1970, foreign debt was negligible among such relatively poor members as Algeria, Indonesia, Iran, Iraq, Nigeria, and Venezuela; by the late 198os, they had all joined the ranks of the heavily indebted. Diversification was far and away every member's primary goal. But almost all fell short. To be sure, all members reduced the share of oil in their GDPs, but only due to sharp rises in the share of nonproductive services. The industrial sector, a key target, expanded in all countries except Nigeria and Venezuela. Across OPEC, workforces shifted toward the service sector. But diversification floundered most egregiously in reducing dependence on oil exports. They remain the mainstay of government finance and account for much of OPEC members' GDP. At the same time, lagging non-oil exports and continuing dependence on imports augur poorly for economic viability after the oil is gone. Diversification was held back by poor human resource bases, lack of indigenous technology, mismanagement of export proceeds, and the pursuit of foolish macroeconomic policies. The free-for-all redistribution of the proceeds of nonrenewable oil resources through subsidies was crippling. It discouraged conservation, encouraged wasteful consumption, inhibited faster growth, and polluted the environment. OPEC will pay the price for years to come.

ROLL CALL

COULD OIL wealth be a curse instead of a blessing? Might natural riches actually hinder growth? If this is not the case, why did OPEC members that rose to worldwide financial and political prominence in the mid-1970s lose their clout and credit soon thereafter? How did the anticipated affluence and stability turn into austerity, deficits, disappointment, and debt?

The usual suspect here is autocratic politics. But the OPEC experience fails to confirm this suspicion. Countries with vastly different political systems and decision-making processes all came to grief. OPEC consisted of five military or quasi-military dictatorships (Algeria, Indonesia, Iraq, Libya, and Nigeria), two totalitarian theocracies (Saudi Arabia and, after 1979, Iran), three patrimonial tribal emirates (Kuwait, Qatar, and the UAE), and three "virtual democracies" of either the French variety (Gabon) or the American (Ecuador and Venezuela). The character of governance seems to have made no difference in the outcome. Rather, a series of different factors sealed each country's fate.

Algeria, once a jewel among French colonies, stagnated. By the mid-1990s, Algeria had managed to waste an enormous chunk of its energy receipts building up a capital-intensive, expensive, and inefficient industrial structure while inexcusably neglecting its once-prosperous agricultural sector. The country faced significant environmental dangers, including water shortages, soil erosion, and industrial pollution. Worse, Algeria was virtually paralyzed by the lack of recognized leadership, economic drift, terrorist attacks, and general chaos.

Indonesia, initially the poorest and most populous OPEC member, was for years one of Asia's fastest-growing economies. It became the World Bank's poster boy for choosing the "right" path to development: rural reconstruction, export diversification, population control, human resource buildup, and low military expenditure. But its system of "crony capitalism" was a house of cards that collapsed at the first sign of trouble in 1998. As the national currency swiftly lost 70 percent of its exchange value, the threats of hyperinflation, uncontrollable budget deficits, and continued social unrest became increasingly real. The economy deteriorated daily, with no effective reforms in sight. Iran under the shah boasted of becoming the world's sixthlargest industrial power by 2000. But by 1998, even its new president, Hojatolislam Seyed Mohammad Khatami, described the country as "sick." With a per capita income barely matching that of 1979, Iran's economy at the threshold of the 21st century suffers from a mammoth resource gap, anemic growth, double-digit inflation and unemployment, a sinkhole of a public sector, and a bloated, inefficient, and corrupt bureaucracy.

Iraq, blessed not only with oil but also water, arable land, and a favorable climate, was the clearest candidate for becoming a prosperous Middle East behemoth. As a result of its oil mismanagement and foolhardy military adventurism, the country became a basket case. By the mid-1990s, real per capita income was hardly larger than in the igq.os. With Iraqi children dying from malnutrition, poverty on the rise, and the economy in ruins, the Iraq of 1998 is a tragic shadow of its 1974 self.

For a good part of the quarter-century since the oil boom, Kuwaiti citizens enjoyed some of the highest living standards in the world. Every walk of life was subsidized. But the "oil curse" finally caught up with them, too. In the 199os, Kuwait still earned go percent of its public revenue from oil. With oil prices plunging to half their iggy level in the summer of 1998, painful cuts in subsidies and citizens' standard of living were inevitable. Despite the billions of dollars squandered on arms each year since the Gulf War, Kuwaitis acknowledge they still could not hold out against a second Iraqi invasion for more than a few hours.

Cradle-to-grave welfare benefits in rich Persian Gulf countries created a large contingent of pampered employees who, having grown used to guaranteed high-paying (albeit often meaningless) government jobs, were unwilling to accept demanding work in the private sector. Thus Kuwait, Qatar, Saudi Arabia, and the UAE imported Egyptian, Palestinian, Bangladeshi, and Filipino "guest workers" to do their daily chores while their own "educated" citizens were unemployed or on the dole.

Nigeria began the OPEC era as the richest and most powerful nation in Africa, with the world's 33rd-highest per capita income, abundant land, resources, and human capital. Its national currency, the naira, was worth twice as much as the U.S. dollar in the mid-1970s. But Nigeria has ended up as the world's 13th-poorest nation, with the naira worth about a cent in 1998. Nigeria suffers from unprecedented domestic fuel shortages (despite more than two million barrels of daily crude output), high inflation, crippled heavy industry, high unemployment, and massive poverty-a near total collapse of the economy and society. With a third of the population considered poor and one-tenth extremely poor, per capita private consumption in 1998 is probably no higher than in the early 197os. On top of this all, Nigeria shares with Indonesia and Venezuela the unenviable reputation of being "the most corrupt nation" on earth, according to Transparency International.

Saudi Arabia, which over two decades invested more than $i trillion trying to transform itself from a desert kingdom to a modern, urban, industrial nation, faced a combination of social, economic, and political challenges by the mid-1990s. With a fourth of Saudi youth virtually idle, per capita GDP in real terms less than one-third its 198o peak, lavish welfare expenditures bringing diminishing returns, continued budget and current account deficits, and strong pressures on the Saudi riyal, the kingdom was, in King Fahd's own estimation, in "crisis." The steep decline in crude oil prices in early 1998 confronted Riyadh (and other oilreliant Persian Gulf capitals) with the specter of an economic catastrophe.

Venezuela once had the highest per capita income in Latin America. In the words of one keen observer, the country that fancied itself the continent's Saudi Arabia ultimately became its Nigeria. By 1994, the Venezuelan economy was a shambles: inflation, at 6o percent a year, was the highest in South America, and fully 70 percent of the population was below the poverty line. The country's credit-risk rating in the mid-1990s was Latin America's worst-at the same level as Algeria and Nigeria.

MISTAKES WERE MADE

THE ASTONISHING inability of OPEC's members to achieve their expected prosperity underscores the futility of searching for a single outside cause. When 13 disparate nations-large and small, rich and poor, under civilian and military rule end up with uncannily similar woes, the results cannot be attributed to bad luck or coincidence. Instead, OPEC's collective experience highlights several links between the oil windfall and subsequent changes in domestic politics, public spending, and traditional mores.

First, the clearest trend among all members was for the state to assume, by necessity or design, an increasingly dominant role in the economy as oil income rose. Even in countries where the state's financial stake in the economy (that is, the ratio of public expenditure to GDP) declined or remained the same, the government conducted more social engineering and regulation. In not only those group members ideologically bent on pursuing "socialist transformation" or a "noncapitalist road" (such as Algeria, Iraq, and Libya) but also in staunchly free-market economies like Kuwait, Qatar, and Saudi Arabia, the government became the architect of far-reaching socioeconomic change. The state acquired a stronger hand in even relatively democratic countries like Ecuador, Gabon, and Venezuela. Since enhanced oil revenues accrued directly to the state treasury, political leadership-traditionally separated from the people in most member countries-also became economically and financially independent. Oil revenues put more resources at the state's disposal, making it more self-reliant, stronger, less responsive to the people's wishes, and more arbitrary. Oil income was used to secure political peace (if not loyalty), ensure public employment, distribute patronage, and co-opt the opposition.

Second, most OPEC members spent their new wealth at home instead of sending it abroad, which would have allowed for slower and more orderly drawdowns for domestic investment. Some, like Algeria, Iran, and Venezuela, even took advantage of their high credit rating in the 197os to borrow in the international capital market and expand domestic capacity This maximalist approach was based on a foolhardy belief in the magical power of money to solve all developmental problems. The spending of oil windfalls at home was, naturally, accompanied by significant waste.

Planned expenditures were uncritically geared to projected oil revenues rather than what the country could absorb. Potential bottlenecks-inadequate domestic infrastructure, including port and transport capacity, communication facilities, warehouses, power supply, and building materials; a colossal shortage of managers and skilled workers; and an inefficient administrative superstructure-were ignored or woefully underestimated.

Third, the speed with which oil windfalls (and, in some cases, additional borrowed resources) were earmarked for domestic use preempted rational consideration of competing investment projects. Instead, a host of economically foolish but politically popular schemes was uncritically adopted and hastily launched. Inadequate planning and the absence of proper risk calculations frequently resulted in massive cost overruns and lengthy delays for industrial projects. Investments in physical infrastructure, while both necessary and useful, were again favored not because of their calculated productive worth but because they were easy to undertake with the help of foreign contractors and foreign equipment and conveyed the aura of modernity and progress. In the Persian Gulf, infrastructure projects were seen as ends in themselves. Not only did such boondoggles return nothing on their invested capital, but the non-oil sector for which they were built could not even afford their maintenance costs. In contrast, investments in education, health, and housing had to be justified as guarantors of viable post-oil development. Even in these seemingly rational and necessary undertakings, however, the hasty use of abundant funds resulted in the sacrifice of substance for form. Without an increase in job creation, for example, the boom in high school graduates created a spectacular rise in the size of the civil service and a vast cadre of underemployed bureaucrats.

Fourth, the windfall tended to be allocated to modern, capitalintensive, and high-cost industries related to oil or cheap energy. Having long attributed advanced countries' clout to their military-industrial power and having always tied development to industrialization, OPEC state planners figured that the only way out of poverty and backwardness was to industrialize at all costs-even where capital-to-output ratios were two to three times higher than in industrialized countries.

Fifth, the ease with which oil revenues were received offered the oil exporters an unprecedented opportunity to increase military spending, usually well beyond national security needs-a feat unimaginable without the oil windfalls. Military spending as a share of GDP in the Persian Gulf members became the highest in the world. The military buildup focused on the quantity and modernity of weapons systems at the expense of adequate training, logistics, and command and control, so even the highest military spenders-Kuwait and Saudi Arabia-were still unable to defend themselves against Iraq in 199o. Furthermore, such defense expenditures both diverted precious resources from more productive investments and necessitated ancillary outlays for infrastructure, training, equipment maintenance, spare parts, and perpetual renovation.

Finally, by far the most common and pernicious outcome of the oil bounty was the rise of a new culture variously termed "petromania," "quick-money fever," or the "catch-as-catch-can syndrome"-in nearly all member economies, particularly among the Arab oil producers. This new "petroculture" gradually weakened the traditional work ethic; reduced incentives for risk-taking, hard work, and independent entrepreneurship; lowered public tolerance for austerity; encouraged shady deals; and raised popular expectations beyond reasonable bounds. Reliance on oil money preempted any serious efforts to mobilize domestic resources through taxation. The share of non-oil taxes in GDP fell in nearly all member countries. With the state as the sole recipient and dispenser of the oil windfalls, rent-seeking activities became not only financially profitable but socially smart. The highest returns on entrepreneurial talent came not from directly productive economic activities but from getting apiece of the "oil rent": a special foreign exchange allotment a lucrative government contract, an import quota, a commission on arms purchases, or an exemption from repatriation of export proceeds.

Unlike the boom-induced and temptingly easy "petrolization" of the economy, "depetrolization" was excruciating. When oil booms turned into busts, addictions to imported food, public welfare, state subsidies, and tax-free living proved irreversible. Petroculture was much easier to embrace than to shed.

While all endured significant setbacks, some countries suffered less than others. Those that did relatively better had low population growth, high rates of investment in both human and physical capital, low government consumption (including military expenditure), minimal wage-price distortions, large domestic markets, and efficient, clean governments. Those that did worse had excessive state intervention in the economy, poorly chosen development strategies, unsustainable services and subsidies, political volatility, and excessive tolerance of rent-seeking activities, corruption, and waste.

THE MORAL OF THE STORY

To AVOID repeating OPEC's woes, the Caspian states should follow eight cardinal rules. First, check the rising dominance of the state over the economy by developing market mechanisms, including a liberal trade and exchange system, privatization, regulations on capital flows, and the speedy deregulation of prices, wages, and interest rates.

Second, allocate revenues from oil and gas exports to domestic projects, public or private, only as warranted by domestic absorptive capacity. Place part of these revenues in an oil trust fund or in foreign assets abroad for slower and more gradual drawdowns as domestic capacity expands. Similarly, do not invest excessively in the nonproductive urban construction and service sectors or in politically popular white elephants.

Third, avoid the easy but hazardous road to hasty industrialization, particularly where inadequate skilled labor, technological expertise, and management know-how cannot support sophisticated high-tech ventures.

Fourth, resist the temptation to squander foreign exchange revenues on increased domestic consumption to placate a restless population. Avoid raising wages beyond labor productivity, cutting taxes, and increasing subsidies. Instead, encourage domestic saving by adopting tight fiscal policies and limiting subsidies to truly needy recipients in a well-planned safety net.

Fifth, coordinate fiscal, monetary, and exchange rate policies so as to strengthen the economy's supply side. Check the demand for limited goods and services and cut profligate public spending and resource waste as much as possible to prevent runaway inflation and growth-impeding currency appreciation.

Sixth, strengthen the judicial system so it can fight corruption, and create a climate that attracts foreign private investment and know-how beyond the energy sector.

Seventh, reform the financial sector to increase the independence and transparency of the central bank and the power of the banking system. Avoid sweetheart deals and "crony capitalism."

Finally, instead of wasting the revenues from exhaustible energy deposits in unending arms races with neighboring states, devote the energy bonanza to building sustainable physical infrastructure and increasing long-term productivity by investing in education, health, and the environment.

Whether the movers and shakers in the emerging, energy-rich Caspian nations learn from the OPEC members' failures, only time will tell.

[Author note]

JAHANGIR AMUZEGAR, an international economic consultant, was a Finance Minister of Iran under the Shah. He is the author of Managing the Oil Wealth, which will be published next year.